



Patent

Attorney's Docket No. 032567-002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of) **BOX AF**
)
Hiroshi SUMYAMA et al.) Group Art Unit: 2622
)
Application No.: 09/238,163) Examiner: M. Nguyen
)
Filed: January 28, 1999) Confirmation No.: 6659
)
For: IMAGE FORMING APPARATUS)
)
)
)

RECEIVED
AUG 07 2002
Technology Center 2600

AMENDMENT/REPLY TRANSMITTAL LETTER

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed is a reply for the above-identified patent application.

- ☐ A Petition for Extension of Time is also enclosed.
- ☐ A Terminal Disclaimer and a check for ☐ \$55.00 (248) ☐ \$110.00 (148) to cover the requisite Government fee are also enclosed.
- ☐ Also enclosed is _____
- ☐ Small entity status is hereby claimed.
- ☐ Applicant(s) request continued examination under 37 C.F.R. § 1.114 and enclose the ☐ \$370.00 (279) ☐ \$740.00 (179) fee due under 37 C.F.R. § 1.17(e).
- ☐ Applicant(s) previously submitted __, on __, for which continued examination is requested.
- ☐ Applicant(s) request suspension of action by the Office until at least __, which does not exceed three months from the filing of this RCE, in accordance with 37 C.F.R. § 1.103(c). The required fee under 37 C.F.R. § 1.17(i) is enclosed.
- ☐ A Request for Entry and Consideration of Submission under 37 C.F.R. § 1.129(a) (146/246) is also enclosed.
- ☒ No additional claim fee is required.

(05/02)

☐ An additional claim fee is required, and is calculated as shown below:

AMENDED CLAIMS					
	NO. OF CLAIMS	HIGHEST NO. OF CLAIMS PREVIOUSLY PAID FOR	EXTRA CLAIMS	RATE	ADDT'L FEE
Total Claims		MINUS =		× \$18.00 (103) =	
Independent Claims		MINUS =		× \$84.00 (102) =	
If Amendment adds multiple dependent claims, add \$280.00 (104)					
Total Amendment Fee					
If small entity status is claimed, subtract 50% of Total Amendment Fee					
TOTAL ADDITIONAL FEE DUE FOR THIS AMENDMENT					

☐ A claim fee in the amount of \$_____ is enclosed.

☐ Charge \$_____ to Deposit Account No. 02-4800.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17, 1.20(d) and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: William C. Rowland
William C. Rowland
Registration No. 30,888

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

Date: August 6, 2002



E.V.
#8
8-9-02

Patent
Attorney's Docket No. 032567-002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED
AUG 07 2002
Technology Center 2600

In re Patent Application of)	BOX AF
)	
Hiroshi SUMYAMA et al.)	Group Art Unit: 2622
)	
Application No.: 09/238,163)	Examiner: Madeleine Anh Vinh Nguyen
)	
Filed: January 28, 1999)	Confirmation No.: 6659
)	
For: IMAGE FORMING APPARATUS)	

RESPONSE AFTER FINAL REJECTION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Official Action dated May 7, 2002, the Examiner is respectfully requested to reconsider and withdraw the outstanding rejections for the reasons set forth below.

The analysis in the section of the Official Action entitled "Response to Applicant's Remarks" misrepresents the relationship between an analog copier and a digital copier.

Analog Copiers:

U.S. Patent No. 5,152,001, hereinafter Hanamoto, discloses an analog copier. As can be seen in Figure 1, light rays incorporating the actual image of a document on the platen are reflected from mirrors 11, 12, 13, and 15 onto the charged drum 1 in order to create a latent toner image on the charged drum 1. The image of the document is never converted into image data, it is merely reflected from mirrors onto the drum 1. Since the

image is never converted into data, the image cannot be stored or held in time for later use.

Digital Copiers:

In contrast to the analog copier illustrated in Hanamoto, U.S. Patent No. 5,535,009, hereinafter Hansen, discloses a digital copier/printer apparatus. As set forth in column 3, lines 10-22, a document is read by an image scanner 22, such as a linear array of solid state charge-coupled devices. By reading the image, the visual or optical image is converted into data representing the image. See column 3, lines 18-22. The data representing the image is then transmitted to a printhead 68 such as a laser or other type of writer. See column 4, lines 50-62. The printhead 68 converts the image data into a series of laser beams which are directed to the photosensitive drum, and which form a latent image on the photosensitive drum. As is well known in the art, a device such as that disclosed by Hansen, can transmit image data from the scanner to the printhead 68, or just as easily, can transmit image data received from an outside source, such as a host computer, to the printhead 68. Thus, as acknowledged by the Examiner, a digital device, such as that taught by Hansen, can be used as either a printer or a digital copier.

Turning attention to the second full paragraph in the section entitled "Response to Applicant's Remarks", it is alleged that "in a conventional reproduction machine, an analog image can be converted to digital image by an analog/digital converter and it was commonly known in the art that a conventional reproduction machine can be a copier and printer machine."

The first half of the statement "in a conventional reproduction machine, an analog image can be converted to digital image by an analog-digital converter" is misleading. Specifically, an analog-digital converter does not convert an analog image to a digital image, it converts analog image *data* to digital image *data*. The concept of converting analog image data to digital image data only occurs in a digital apparatus, wherein an image is scanned by an image reader and converted into image data. In such a case, analog image data is typically converted to digital image data for further processing and storage. See, for example, U.S. Patent No. 5,206,735, issued to Gauronski et al. Thus, assuming the first half of the sentence refers to converting analog image data to digital image data, the first half of the sentence also only applies to digital machines. In an analog type device, such as that disclosed by Hanamoto, there is no analog image data to convert to digital image data. Furthermore, analog images themselves are not converted to digital images, only analog image data is converted to digital image data.

The second half of this statement is true only if the "conventional reproduction machine" is a digital machine, such as the type taught by Hansen. It is well known that an analog copying machine, such as that taught by Hanamoto cannot function as a printer. There is no mechanism for the analog machine of Hanamoto to accept image data and to convert the image data into a light beam for forming a latent image on the photosensitive drum 1. Since Hanamoto cannot accept or convert image data, it can only function as a copier by reflecting the image off of the document onto the photosensitive drum 1.

Accordingly, the first sentence in the second paragraph on Page 2 of the Official Action refers only to digital machines, and not analog machines, such as that disclosed by

Hanamoto. Furthermore, an analog copier, such as that disclosed by Hanamoto, never converts the image into image data.

At the bottom of Page 2 of the Official Action, it is stated that "an analog copier machine can be improved to become [a] digital copier machine while a reproduction device can be an analog and digital copier." In this statement, the Examiner has confused the concept of converting analog image data to digital image data with the concept of allegedly converting an analog copier machine to a digital copier machine. While, as set forth above, it is common in a digital copier machine to convert analog image *data* to digital image *data*, there is no teaching or suggestion in the prior art of converting an analog copier machine to a digital copier machine. Such a conversion would involve removing the mirror system of the analog copier machine and replacing it with an image reader-type scanner which would convert the image signal into image data. Although it is technically possible to convert an analog copier machine to a digital copier machine, there is clearly no teaching or suggestion in the prior art of making such a conversion. As set forth in Section 2143.01 of the Manual of Patent Examining Procedure, the fact that a prior art device can be modified or combined with another prior art device is not evidence of obviousness. It is not enough that the combination or modification can be made, there *must* be a suggestion of making the modification or combination. In this case, it would not only be quite difficult to make such a conversion, there is clearly no teaching or suggestion of such a conversion in any of the prior art cited by the Examiner. Clearly, there is no suggestion in Hansen, as implied by the Examiner, of converting an analog copier machine to a digital copier machine.

Accordingly, there is a significant difference between an analog copier machine and a digital reproduction device, only the latter of which can be used as either a printer or a copier. As set forth above, the analog copying machine, which cannot function as a printer, functions in a completely different manner than a digital reproduction device.

Turning attention now to the rejection of claims 1-18 based on Hattori and Hanamoto, Applicants continue to dispute the propriety of combining the teachings of Hattori, which relate to a digital image machine, with those of Hanamoto, which relate to an analog copier. Since Hanamoto has nothing to do with digital reproduction devices, it would not have been obvious for someone looking to improve the control means relating to the storage of image data to look to Hanamoto, which discloses an analog copier control system and has nothing to do with the storage of image data.

A problem solved by the present invention is that in a conventional image forming apparatus, if a user wishes to stop the output of the image data and discard the image data because some mistakes are found in the image data, the conventional image forming apparatus discards both the image data being output as well as the associated image forming conditions. See Page 2, lines 3-12 of the present application. It is an object of the present invention to overcome this problem by using two separate memories, one of which stores image data, and another which stores image forming conditions. According to the present invention, the image data can be discarded while maintaining the associated image forming conditions stored in the respective memory.

In view of the fact that the image forming apparatus includes a memory for storing image data, the image forming apparatus is of the type that stores image data, and not of

the type that merely reflects an image from the document onto the photosensitive drum.

Clearly, Hanamoto does not teach or suggest two separate memories, one for storing image data and a second for storing image forming conditions. Thus, the concept of discarding image data stored in one memory while maintaining associated image forming conditions in a second memory is clearly not taught or suggested by Hanamoto. The Examiner emphasizes the fact that Hanamoto discloses a copying machine that stores copying conditions, and that the conditions are maintained in memory after the *interruption* of the printing process. However, "interrupting" a printing process is not analogous to discarding image data. Interrupting a printing process merely stops a printing process. Since there is no image data stored in Hanamoto, the interruption process disclosed therein is not analogous in any way to the discarding of image data. Thus, Hanamoto clearly does not teach or suggest the concept of saving some data while discarding others.

Furthermore, on line 5 on Page 5 of the Official Action, the Examiner clearly admits that Hattori does not directly teach the storage of image forming conditions after the discarding of image data. Since Hanamoto does not relate in any way to the discarding of image data, it cannot add to or modify the operation of Hattori in the area of discarding image data.

Furthermore, even if the references were combined, the result would not be the present invention. For example, even the Official Action acknowledges that the relevant action in Hanamoto is "interrupting" the printing process, not discarding image data. At best, the Official Action implies that saving memory forming conditions after an interruption, not a discarding of image data, would be suggested. However, even this

implication assumes that the combination of references is proper, and applicants strongly submit that the combination is not proper. Accordingly, even if all assumptions made in the Official Action are accepted, the present invention is still not taught or suggested.

Specifically, the Official Action has not shown, nor does it allege, that the prior art teaches or suggests the claimed invention, which includes the ability to discard image data stored in one image memory, while maintaining associated image forming conditions in another memory.

Accordingly, Applicants allege that the combination proposed by the Examiner is improper, and should be withdrawn. As a result, the rejection of the claims should also be withdrawn. In addition, the arguments set forth in the Response filed on February 21, 2002 are also still valid and incorporated herein by reference.

In the event that there are any questions concerning this response or the application in general, the Examiner is respectfully urged to telephone the undersigned so that prosecution of the application may be expedited.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: William C. Rowland

William C. Rowland
Registration No. 30,888

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

Date: August 6, 2002